

AMENDMENTS TO THE CLAIMS

Please cancel Claims 3 and 28; and amend Claims 1, 14, and 25 as follows.

LISTING OF CLAIMS

1. (Currently Amended) A method for beam steering, comprising:
measuring received signal characteristics of the beam;
providing feedback based on the signal characteristics; and
adapting the beam based on the feedback information[[]].
wherein the feedback includes relative strength information regarding a first signal with respect to a second signal.
2. (Original) The method of Claim 1, further comprising using a one-bit punctured on a reverse link channel as feedback to indicate quality of a current signal compared to a previous signal.
3. (Canceled)
4. (Original) The method of Claim 1, further comprising transmitting the number of multipaths as part of the feedback information.
5. (Original) The method of Claim 1, further comprising transmitting the feedback information on a pre-determined schedule.

6. (Original) The method of Claim 1, further comprising transmitting the feedback information when requested.

7. (Original) The method of Claim 1, further comprising steering the beam to ensure a strong signal strength.

8. (Withdrawn) A method for processing signal characteristic information comprising:

receiving a plurality of multipaths;

measuring a strength of each of the plurality of multipaths;

providing feedback to adapt a beam based on the feedback information.

9. (Withdrawn) The method of Claim 8, further comprising measuring the number of multipaths that can be demodulated in parallel.

10. (Withdrawn) The method of Claim 8, further comprising measuring a relative phase offset of each multipath.

11. (Withdrawn) The method of Claim 8, further comprising determining a change in conditions before providing feedback.

12. (Withdrawn) The method of Claim 8, further comprising providing feedback on demand.

13. (Withdrawn) The method of Claim 8, further comprising providing feedback on a periodic basis.

14. (Currently Amended) A method of determining a beam transmission path comprising:

transmitting a beam sweep through a sector;

determining signal conditions for the beam throughout the sweep; and

providing feedback based on the signal conditions indicating a preferred transmission path[[]].

wherein the feedback includes relative strength information regarding a first signal with respect to a second signal.

15. (Original) The method of Claim 14, further comprising correlating the feedback with a sweep schedule.

16. (Original) The method of Claim 14, wherein the feedback includes a relative strength indicator; and further comprising comparing the relative strength indicator of the signal throughout the beam sweep.

17. (Original) The method of Claim 14, wherein the feedback comprises a single bit, wherein the single bit indicates whether an earliest received signal is the strongest.

18. (Original) The method of Claim 14, wherein the feedback comprises a single bit which indicates a quality of a current signal compared to a previous signal.

19. (Original) The method of Claim 14, further comprising transmitting a plurality of beam sweeps, wherein a first of the plurality of beam sweeps is for demodulation.

20. (Original) The method of Claim 14, further comprising comparing a relative difference between feedback results to determine a preferred transmission path.

21. (Withdrawn) A method of determining a beam transmission path comprising:

transmitting a beam sweep through a plurality of sectors;

determining signal conditions for the beam sweep in each of the plurality of sectors;

selecting a preferred sector based on the signal condition;

dividing the preferred sector into a plurality of sub-sectors;

transmitting a beam sweep through the plurality of sub-sectors;

determining signal conditions for the beam sweep in each of the plurality of sub-sectors; and

selecting a preferred sub-sector based on the signal condition.

22. (Withdrawn) The method of Claim 21, further comprising transmitting the signal condition via a feedback path.

23. (Withdrawn) The method of Claim 21, further comprising defining the signal condition as signal strength.

24. (Withdrawn) The method of Claim 21, further comprising further dividing the sub-sectors to obtain a narrower beam width.

25. (Currently Amended) A wireless communication system comprising:
a base station which transmits a signal; and
one or more mobile stations which receive the transmitted signal and measures one or more characteristics of the received signal and provide feedback based on the one or more signal characteristics, wherein the base station adapts the beam based on the feedback[.].
wherein the feedback includes relative strength information regarding a first signal with respect to a second signal.

26. (Original) The wireless communication system of Claim 25, wherein the feedback is a one-bit punctured on a reverse link channel which indicates a quality of a current signal compared to a previous signal.

27. (Original) The wireless communication system of Claim 25, wherein the feedback is a one-bit punctured on a reverse link channel which indicates whether an earliest received signal is the strongest.

28. (Canceled)

29. (Original) The wireless communication system of Claim 25, wherein a number of multipaths is provided as part of the feedback information.

30. (Original) The wireless communication system of Claim 25, wherein the feedback information is transmitted on a pre-determined schedule.

31. (Original) The wireless communication system of Claim 25, wherein the feedback information is transmitted when requested.

32. (Original) The wireless communication system of Claim 25, wherein the base station steers the beam to ensure a strong signal strength.